National Institute of Environmental Health Sciences

Climate change and the geographic distribution of infectious diseases

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Abstract:

Our ability to predict the effects of climate change on the spread of infectious diseases is in its infancy. Numerous, and in some cases conflicting, predictions have been developed, principally based on models of biological processes or mapping of current and historical disease statistics. Current debates on whether climate change, relative to socioeconomic determinants, will be a major influence on human disease distributions are useful to help identify research needs but are probably artificially polarized. We have at least identified many of the critical geophysical constraints, transport opportunities, biotic requirements for some disease systems, and some of the socioeconomic factors that govern the process of migration and establishment of parasites and pathogens. Furthermore, we are beginning to develop a mechanistic understanding of many of these variables at specific sites. Better predictive understanding will emerge in the coming years from analyses regarding how these variables interact with each other.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2904908

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Precipitation, Temperature

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Airborne Disease, Foodborne/Waterborne Disease, Vectorborne Disease

Airborne Disease: Influenza

Foodborne/Waterborne Disease: Other Diarrheal Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Chikungunya, Rift Valley Fever, West Nile Virus

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children, Low Socioeconomic Status

Resource Type: ☑

format or standard characteristic of resource

Policy/Opinion

Timescale: ☑

time period studied

Time Scale Unspecified